



PATENT
Attorney Docket No. 06028.0027-00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
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François COTTARD et al.) Group Art Unit: 1751
)
Application No.: 10/688,970) Examiner: E. Elhilo
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Filed: October 21, 2003)
)
For: OXIDATION DYEING) Confirmation No.: 4185
)
COMPOSITION FOR KERATIN)
)
FIBERS COMPRISING A)
)
CATIONIC POLY(VINYLLACTAM))
)
AND AT LEAST ONE C₁₀-C₁₄)
)
FATTY ALCOHOL, METHODS)
)
AND DEVICES FOR OXIDATION)
)
DYEING)

Commissioner for Patents
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Sir:

DECLARATION UNDER 37 C.F.R. § 1.132

I, Isabelle SCHLOSSER, do hereby make the following declaration:

1. I am a French citizen, residing at 8, rue de Chantilly, 75009 PARIS, FRANCE.
2. I am an agronomist-engineer from the Institut National Agronomique Paris-Grignon (INAPG), FRANCE.
3. I have been employed by L'ORÉAL since 1991, and I am presently a research engineer. During my employment at L'ORÉAL, I have been engaged in research and development regarding hair dyeing.

4. I understand the rejections made in the Office Action of June 13, 2006, in Application No. 10/688,970.

5. Given my education and experience, particularly in the area of hair dyeing, I consider myself able to provide the following testimony based on experiments conducted by me or under my supervision.

6. The following experiments were completed under standard laboratory conditions and compare a composition according to the present invention, Inventive Composition A, with Comparative Composition B, corresponding to a composition representative of the those disclosed in Laurent combined with a thickener as disclosed by Cottard.

I. Preparation of Compositions

7. The following compositions were prepared (see Table I below). Inventive Composition A contains at least one C10-C14 fatty alcohol and at least one synthetic thickener as claimed. Comparative Composition B is identical to Inventive Composition A, except that it contains a fatty alcohol outside the C10-C14 range (C18).

TABLE I

The ingredient quantities are expressed by weight percent.

A.M. = "active material."

Ingredients	Inventive Composition A	Comparative Composition B
lauric alcohol	6 (%A.M.)	-
Oleic alcohol	-	6 (%A.M.)
Oleic acid	2.7	2.7
Styleze W20L (1) % A.M.	4	4
Aculyn 44 (2) % A.M.	0.4	0.4

1-hydroxy-4-aminobenzene	0.5	0.5
1,4-diaminobenzene	0.1	0.1
1-methyl-2-hydroxy-4-betahydroxyethylamino-benzene	0.921	0.921
Diethylenetriaminepentaacetic acid, pentasodium salt as a 40 % aqueous solution	2	2
Pure monoethanolamine	0.63	0.63
Sodium metabisulfite	0.71	0.71
Aqueous ammonia (at 20% of ammonia)	10.2	10.2
Deionized water (qs)	Qs 100	Qs 100

(1) Styleze W20L is a terpolymer of vinylpyrrolidone/ dimethyl aminopropylmethacrylamide /lauryldimethylpropyl-methacrylamidoammonium chloride (polyquaternium 55).

(2) Aculyn 44 is a SMDI /polyethyleneglycol copolymer with decyl termination.

II. Testing Procedure

8. At the time of use, each dyeing composition was mixed with the oxidizing agent at 20 volume (6% H₂O₂, pH=2+/-0.2) in an amount of 1 part of dyeing composition per 1.5 part of oxidizing agent.

9. The viscosities of Inventive Composition A and Comparative Composition B were measured, both before and after mixing with the oxidizing agent.

10. Each of the resulting mixtures was then applied onto locks of natural or permed hair containing 90% white hair. After 30 minutes, the hair was then rinsed with water, washed with a standard shampoo, rinsed again, and dried.

III. Viscosity Determination

11. The viscosities of Inventive Composition A and Comparative Composition B were measured at 25°C, using a Rheomat 180 Mettler, ambient temperature (20°C±5°C), 200 rd/min, with module 3 or 4 according to the viscosity (see Table II).

TABLE II

	Inventive Composition A	Comparative Composition B
Before mixing	70 cps	38 cps
After mixing	124.4 cps	50 cps

IV. Color Determination

12. The color of the compositions on natural and permed hair were measured according to the L*a*b* system using a Data Color SF 600 X spectrophotometer.

13. According to this system, L indicates the lightness of the color. The chromaticity coordinates are expressed by the parameters a* and b*; a* indicates the axis of red/green shades and b* indicates the axis of yellow/blue shades.

14. ΔE , which is the color variation between a colored lock of natural hair and a colored lock of permed hair, is obtained with the following formula:

$$\Delta E = \sqrt{(L^* - L_0^*)^2 + (a^* - a_0^*)^2 + (b^* - b_0^*)^2}$$

wherein values L*, a* and b* correspond to the permed hair and the L0*, a0* and b0* correspond to the natural hair. The lower the ΔE , the less selective the hair color.

15. The selectivity of the coloration is the variation of the color between natural colored hair and permed colored hair. Natural hair is representative of the nature of the hair at the root of the hair and the permed hair is representative of the nature of the hair at the end. The lesser the selectivity is, higher the color quality is. A lesser selectivity is representative of a more homogeneous color along the fibers.

16. The results are expressed in Table III:

TABLE III

Inventive Composition A	$\Delta E = 6.79$
Comparative Composition B	$\Delta E = 10.36$

V. Analysis of Results

17. The results in Table II demonstrate that it was easier to mix the oxidizing agent with Inventive Composition A. In addition, the data in Table II demonstrate that the viscosity of the ready-to-use Inventive Composition A (after mixing with the oxidizing agent) provides a significantly better viscosity than Comparative Composition B.

18. Based on my education and experience, these results are unexpected; given that it was not known that at least one C10-C14 fatty alcohol in combination with at least one synthetic thickener and at least one oxidation dye as claimed, would provide a better localization of the composition on the hair (i.e., the composition will remain well confined to the site of application), and the composition does not run, after mixing with an oxidizing agent.

19. The results in Table III demonstrate that Inventive Composition A provides a coloration that is significantly less selective than that obtained with Comparative Composition B.

20. Based on my education and experience, these results are unexpected, given that it was not known that at least one C10-C14 fatty alcohol in combination with at least one synthetic thickener and at least one oxidation dye as claimed, would significantly improve the coloration of the hair.

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21. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated: 11/06/09

By


Isabelle SCHLOSSER